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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,825	08/06/2003	Akira Nagashima	03500 016040.1	7347
5514	7590	10/21/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			SHAH, MANISH S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/634,825	<b>Applicant(s)</b> NAGASHIMA ET AL.	
	<b>Examiner</b> Manish S. Shah	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4-18,20-22 and 25-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-18,20-22 and 25-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1, 38 & 50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,676,254 B2 in view of Shimada et al. (# US 6302530).

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is disclosed in the US Patent and is covered by the US Patent, since the US patent and the application are claiming common subject matter, as follows as shown in Table: 1 below.

**TABLE: 1**

# US 6676254 B2 CLAIMS	# 10/634,825 CLAIMS
<p>1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii) and;</li></ul> <p>which has a solubility parameter of not less than 15; and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member comprises at least one compound selected from the group consisting of polyacetate and polyolefin.</p>	<p>1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii);</li></ul> <p>and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member is an ink holding member made of polypropylene.</p> <p>38. An ink cartridge comprising an aqueous ink and ink contact member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii);</li></ul> <p>and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member is an ink-holding member made of polypropylene.</p> <p>50. An ink tank comprising an aqueous ink, an ink container and ink holding member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii);</li></ul> <p>and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member is an ink-holding member made of polypropylene.</p>

With respect to claim 1, the pending application claiming the recording method steps, which is almost same as of US patent.

However, the pending application claimed a compound, which is not compatible with (ii), which is broader limitation than the US Patent, so this limitation still can read by the US Patent claim.

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition of the US Patent in to the recording method of pending application to get the printed image.

With respect to claims 1, 38 & 50 the pending application claiming (1) the ink cartridge including the ink composition, (2) The ink holding member includes polypropylene.

Shimada et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 8, line: 25-45), which has a low permeability to vapor, and because of that ink can maintain their quality for an extended period of time.

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition taught in the US Patent in to the ink cartridge of Omata et al. to get the low coast ink cartridge, and because of the low permeability to vapor, the ink can maintain their quality for an extended period of time (column: 8, line: 40-45).

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3. Claim 1, 38 & 50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,676,254 B2 in view of Omata et al. (# US 5953031).

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is disclosed in the US Patent and is covered by the US Patent, since the US patent and the application are claiming common subject matter, as follows as shown in Table: 1 below.

**TABLE: 1**

# US 6676254 B2 CLAIMS	# 10/634,825 CLAIMS
<p>1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii);</li></ul> <p>(ii) and; which has a solubility parameter of not less than 15; and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member comprises at least one compound selected from the group consisting of polyacetate and polyolefin.</p>	<p>1. A recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii);</li></ul> <p>and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member is an ink holding member made of polypropylene.</p> <p>38. An ink cartridge comprising an aqueous ink and ink contact member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii);</li></ul> <p>and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member is an ink-holding member made of polypropylene.</p> <p>50. An ink tank comprising an aqueous ink, an ink container and ink holding member, wherein the ink comprises</p> <ul style="list-style-type: none"><li>(i) a fluorescent coloring material;</li><li>(ii) a nonionic surfactant;</li><li>(iii) a compound which is not compatible with (ii);</li></ul> <p>and</p> <ul style="list-style-type: none"><li>(iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii), and</li></ul> <p>wherein the ink contact member is an ink-holding member made of polypropylene.</p>

With respect to claim 1, the pending application claiming the recording method steps, which is almost same as of US patent.

However, the pending application claimed a compound, which is not compatible with (ii), which is broader limitation than the US Patent, so this limitation still can read by the US Patent claim.

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition of the US Patent in to the recording method of pending application to get the printed image.

With respect to claims 1, 38 & 50 the pending application claiming (1) the ink cartridge including the ink composition, (2) The ink holding member includes polypropylene.

Omata et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 6, line: 50-62).

It was obvious to one of ordinary skill in the art at the time of invention was made to use the ink composition taught in the US Patent in to the ink cartridge of Omata et al. to get the low coast ink cartridge, and because of the high transparency of the polypropylene, the users to visually check an ink remaining amount for convenience of use (column: 6, line: 50-62).



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-18, 20-22, 25-37 & 51 are rejected under 35 U.S.C. 103(a) as being obvious over Nagashima et al (# US 6676734) in view of Shimada et al. (# US 6302530).

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

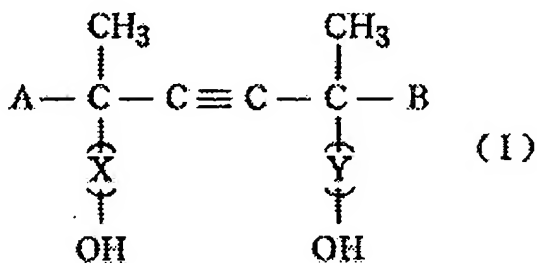
Nagashima et al. discloses a recording method comprising a step of providing an ink from a recording head to a recording medium through a gap provided between the recording head and the recording medium, the ink being supplied to the recording head from an ink tank comprising an ink contact member and the ink contacting the ink contact member (column: 38, line: 49-68; column: 39, line: 1-36), wherein the ink comprises (i) a fluorescent coloring material, which is an azo dye (column: 11, line: 1-25) and the ink contains ammonium ions and alkali metal ions, and at least one selected from urea and derivatives thereof, which includes alkyl derivatives of urea and ethylene oxide adducts of urea and propylene oxide adducts of urea; and the surface tension of the ink is not more than 40mN/m (dyne/cm) (column: 26, line: 10-25) and pH is not more than 8; (ii) a nonionic surfactant; (iii) a compound which is not compatible with (ii) and has the solubility parameter not less than 15 (column: 8, line: 25-35), which is selected from ethylene oxide, sugar alcohol (column: 8, line: 40-50); and (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii) (see Abstract; column: 2, line: 50-65), and wherein the ink contact member in the ink holding member made of polymer formed by condensation or polymerization reaction of organic compounds (column: 29, line: 20-30). They also disclose that the contact member is an ink-container with an ink holding member (figure: 1-3). They also discloses the step includes the sub-steps of: ejecting ink droplets from an orifice in response to recording signals with ink-jet method, and conducting recording on the recording medium (column: 38, line: 49-68), which is performed by applying thermal energy to the ink (column: 27, line: 30-35). They also disclose that the fluorescent coloring material is water-soluble or hydrophilic (column:

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11, line: 1-7), wherein the concentration of the fluorescent coloring material in the ink is equal to or exceeds the concentration thereof exhibiting the maximum fluorescence intensity, and wherein the concentration of the fluorescent coloring material in the ink is not more than 1.5% by mass based on total mass of the ink (column: 14, line: 55-65), wherein the fluorescent coloring material is a fluorescent dye (column: 11, line: 5-23).

They also disclose that the nonionic surfactant is a liquid at room temperature and has an HLB of not more than 13 (column: 9, line: 11-20) and the concentration of the nonionic surfactant in the ink is a value causing no phase separation in the ink and the concentration of the nonionic surfactant in the ink is that does not cause phase separation of the nonionic surfactant even when the ink does not contain the fluorescent coloring material, wherein the concentration of the nonionic surfactant is contained in an amount not more than 1.0% by mass based on total weight of the ink (column: 9, line: 25-50). They also disclose that the nonionic surfactant has a structure represented by the following formula (column: 9, line: 50-65). They also disclose that the fluorescent coloring material is C.I. Acid Red 52, and the content of the coloring material is at most 0.4% by weight based on total weight of ink (see Table: 1-1).

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(wherein A and B are independently  $\text{C}_n\text{H}_{2n+1}$  (n being an integer of 1 to 10), and X and Y are independently a ring-opened ethylene oxide unit and/or a ring-opened propylene oxide unit.)

Nagashima et al. differs from the claim of the present invention is that the ink holding member comprises the polypropylene.

Shimada et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 8, line: 25-45), which has a low permeability to vapor, and because of that ink can maintain their quality for an extended period of time.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink holding member of Nagashima et al. by the aforementioned teaching of Shimada et al. in order to get the low coast ink cartridge, and because of the low permeability to vapor, the ink can maintain their quality for an extended period of time (column: 8, line: 40-45).

5. Claims 38-50 & 52-53 are rejected under 35 U.S.C. 103(a) as being obvious over Nagashima et al (# US 6676734) in view of Shimada et al. (# US 6302530).

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Nagashima et al. discloses an inkjet recording apparatus including an ink cartridge including an aqueous ink and ink contact member (figure: 4, 13 & 28; column: 38, line: 49-68; column: 39, line: 1-36), wherein the ink includes (i) a fluorescent coloring material, which is an azo dye (column: 11, line: 1-25) (ii) a nonionic surfactant; (iii) a compound which is not compatible with (ii) and has the solubility parameter not less than 15 (column: 8, line: 25-35), which is selected from ethylene oxide, sugar alcohol

(column: 8, line: 40-50); and (iv) a liquid medium for dissolving or dispersing (i), (ii) and (iii) (see Abstract; column: 2, line: 50-65), and wherein the ink contact member in holding member made of polypropylene (polymer formed by condensation or polymerization reaction of organic compounds) (column: 29, line: 20-30). They also disclose that the contact member is an ink-container with an ink-holding member (figure: 1-3), wherein ink-holding member is porous, contact with the ink container, with multi layer structure (figure: 5-6, 13). They also disclose that the fluorescent coloring material is C.I. Acid Red 52, and the content of the coloring material is at most 0.4% by weight based on total weight of ink (see Table: 1-1).

Nagashima et al. differs from the claim of the present invention is that the ink holding member comprises the polypropylene.

Shimada et al. teaches that to store the ink, recording apparatus need ink cartridge (ink holding member), wherein ink-holding member is made of polypropylene (column: 8, line: 25-45), which has a low permeability to vapor, and because of that ink can maintain their quality for an extended period of time.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink holding member of Nagashima et al. by the aforementioned teaching of Shimada et al. in order to get the low coast ink cartridge, and because of the low permeability to vapor, the ink can maintain their quality for an extended period of time (column: 8, line: 40-45).

***Response to Arguments***

6. Applicant's arguments filed 04/13/2005 have been fully considered but they are not persuasive. Applicant argued that the Omata et al. reference and Nagashima et al. reference did not suggest or teach that the ink holding member comprises polypropylene, which is not persuasive. Omata et al. clearly teaches in column: 6, line: 52-61 that "Furthermore, because of small welding area described above, a material, such as polypropylene (P.P.), polybutylene-telephthanol (P.B.T.) or the like, which has high gas barrier capacity to be ideal as a material for the ink tank container but is difficult to use for poor welding ability, can be certainly welded. Particularly, since P.P. material is low in material cost and has high transparency, the tank container formed of the PP material permits the user to visually check an ink remaining amount for convenience of use." So Omata et al. teaches that the ink holding member is made of polypropylene.


7. Nagashima et al. teaches that the ink holding member made of the polymer formed by condensation or polymerization reaction of organic compounds, and the new reference Shimada et al. teaches that ink cartridge is made of the polymer polypropylene. So it is obvious to modify the ink container of Nagashima et al. with polypropylene taught by Shimada et al. reference.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Manish S. Shah  
Primary Examiner  
Art Unit 2853

MSS

10/19/05